



Anadromous Fish Screen Program (AFSP) 2011 AWP

February 17, 2011

Presentation Outline

- Program Authority & Purpose
- Program Organization
- Past Projects
- Coordination with State of California
- 2010 Accomplishments
- 2011 Budget & Planned Activities
- Questions

Central Valley Project Improvement Act

- AFSP was initiated in 1994 to implement fish screening;
- CVPIA Section 3406 (b)(21) directs Interior to assist the State of California in efforts to implement measures to avoid losses of juvenile anadromous fish from diversions in Sacramento and San Joaquin watersheds and the Delta;
- The cost share from Interior shall not exceed 50% of the total cost.

Anadromous Fish Screen Program



AFSP Program Leads are:

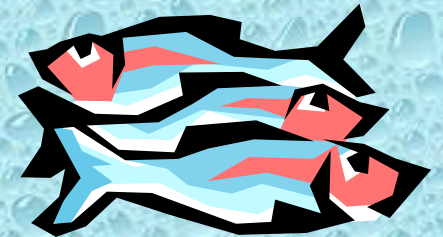
- Dan Meier, USFWS
- Tim Rust, Reclamation

Anadromous Fish Screen Program Interagency Technical Team

■ Tom Schroyer	Department of Fish and Game
■ Fred Jurick	Department of Fish and Game
■ Jonathan Nelson	Department of Fish and Game
■ Tim Rust	Bureau of Reclamation
■ Allen Lindauer	Bureau of Reclamation
■ Tammy LaFramboise	Bureau of Reclamation
■ Steve Thomas	National Marine Fisheries Service
■ Roger Padilla	Department of Water Resources
■ Dan Meier	US Fish and Wildlife Service

Key AFSP Activities

- Fish Screen Funding and Project Coordination
- Review of Feasibility Studies
- Value Engineering/Planning
- Design Review
- Environmental Compliance
- Construction Oversight
- Review of Post-Construction Evaluation & Assessment Plans



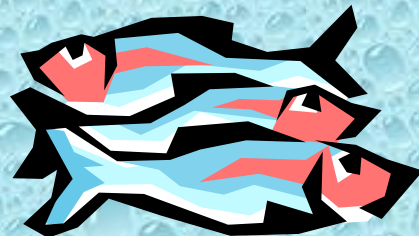
AFSP Screening Summary

- Since 1994 - 29 screening projects completed; over 4,800 cfs screened
- 2007 - Sutter Mutual Fish Screen (960 cfs)
- 2008 - RD 108 Fish Screen (300 cfs)
- 2009 – Meridian Farms Phase I (30 cfs)

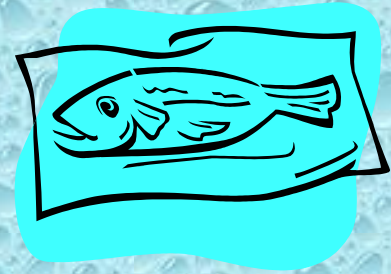


AFSP Screening Summary

- Sacramento River – 16 Projects = 3692 cfs
- Butte Creek – 4 Projects = 257 cfs
- Yuba River – 1 Project = 65 cfs
- American River – 1 Project = 210 cfs
- Delta – 6 Projects = 113 cfs
- San Joaquin River – 1 Project = 260 cfs



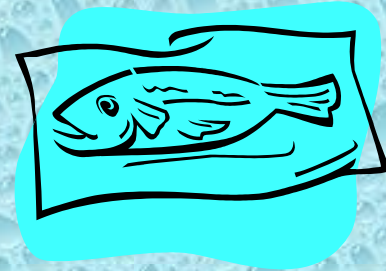
Coordination with State of California



CALFED ERP established fish screening priorities under its
Phase I Implementation Plan:

- M & T Ranch/Llano Seco (Sacramento) – **Complete (1997)**
- Princeton-Cordora Glenn Provident – **Complete (1999)**
- Hallwood-Cordua (Yuba River) – **Complete (2000)**
- City of Sacramento's diversions (American & Sacramento) – **Complete (2004 & 2005)**
- Sutter Mutual's diversions (Sacramento) – **Complete (2007, 2010 & 2011)**
- RD-108's diversions (Sacramento) – **Complete (2000, 2008 & 2011)**
- Meridian Farm's diversions (Sacramento) (One of three intakes screened in 2009)
- Coleman NFH intakes (Battle Creek) (One of three intakes screened in 2010 by FWS)
- Pleasant Grove-Verona diversions (NCC) (Feasibility Study completed)
- Natomas Mutual diversions (NCC and Sacramento) (Two of five intakes are currently being relocated and screened)
- RD 2035 (Sacramento) (30% design)

Coordination with State of California



The CALFED ERP Phase I Implementation Plan also identified a critical need to conduct studies to improve knowledge of the benefits of fish screening. Some key questions that were identified included:

- **Cost Benefits:** Is there a point at which screening additional diversions no longer provides population level benefits for the fish of interest?
- **Cumulative Benefits:** Are the cumulative benefits of screening projects known?
- **Selection Criteria:** Is it more beneficial to screen some diversions than others, based on size, location, and mode of operation?
- **Alternatives to Screening:** Are there alternatives to fish screens for many diversions?

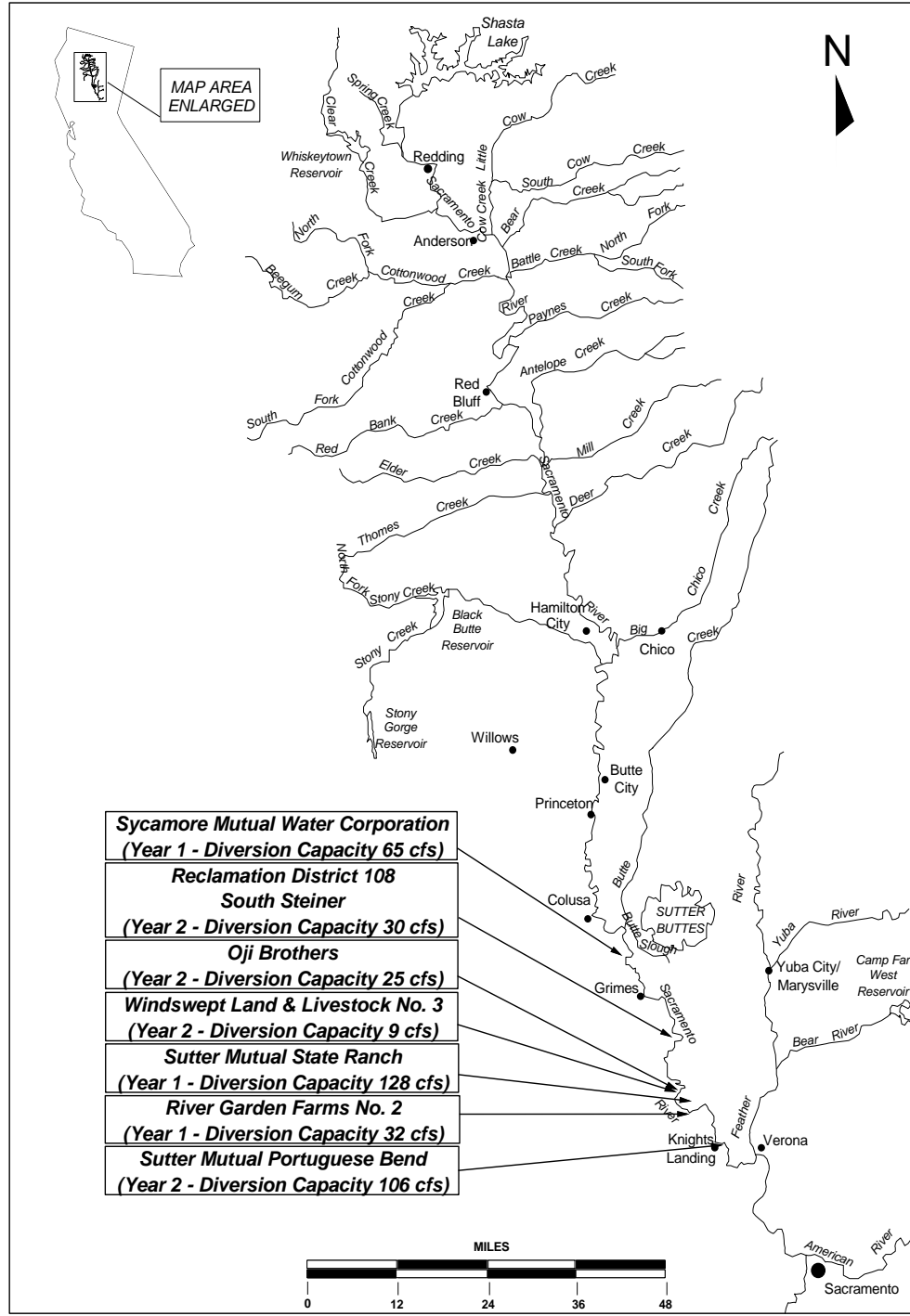
Anadromous Fish Screen Program Accomplishments FY 2010



- Continued implementation of four year (2009-2012) fish screening and monitoring program in partnership with the Family Water Alliance. Funded with prior year State and Federal funding.
 - Collect fish loss data prior to installation of fish screens to assess biological benefits of fish screens and to help prioritize fish screening efforts.

2009-2012 Screening/Monitoring Program

Diversion Sites	2009 Monitoring (April – September)	2010 Monitoring (April – September)	2011 Monitoring (April – September)	2012 Monitoring (April – September)
Year 1 Sites (Selected in 2008)	Three	Three (Screened)		
Year 2 Sites (Selected in 2009)		Four	Four (To be Screened)	
Year 3 Sites (Selected in 2010)			Five	Five (To be Screened)



Anadromous Fish Screen Program Accomplishments FY 2010



- Completed fish entrainment monitoring at three Sacramento River diversions and constructed cylindrical fish screens:
 - River Garden Farms #2 (32 cfs)
 - Sycamore Mutual (Davis Ranches #2) 65 cfs
 - Sutter Mutual State Ranch (154 cfs)

Sycamore Mutual Fish Entrapment Monitoring



Anadromous Fish Screen Program Accomplishments FY 2010



- Installed cone screen (11 cfs) at the Lake California diversion on the Sacramento River. Replaced old DFG screen that didn't meet current screen criteria.



Sutter Mutual State Ranch



Sycamore Mutual (Davis Ranches #2)



River Garden Farms #2

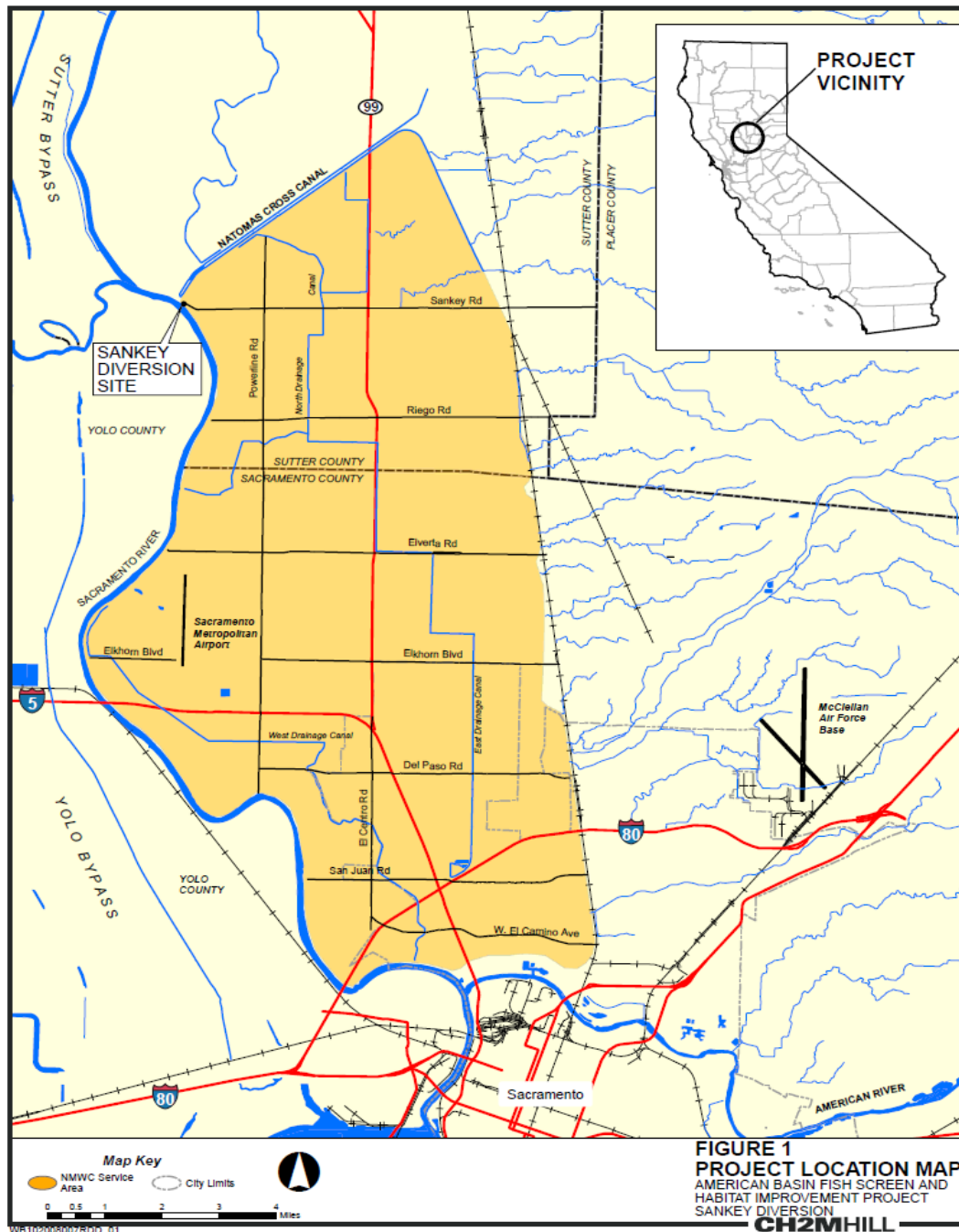


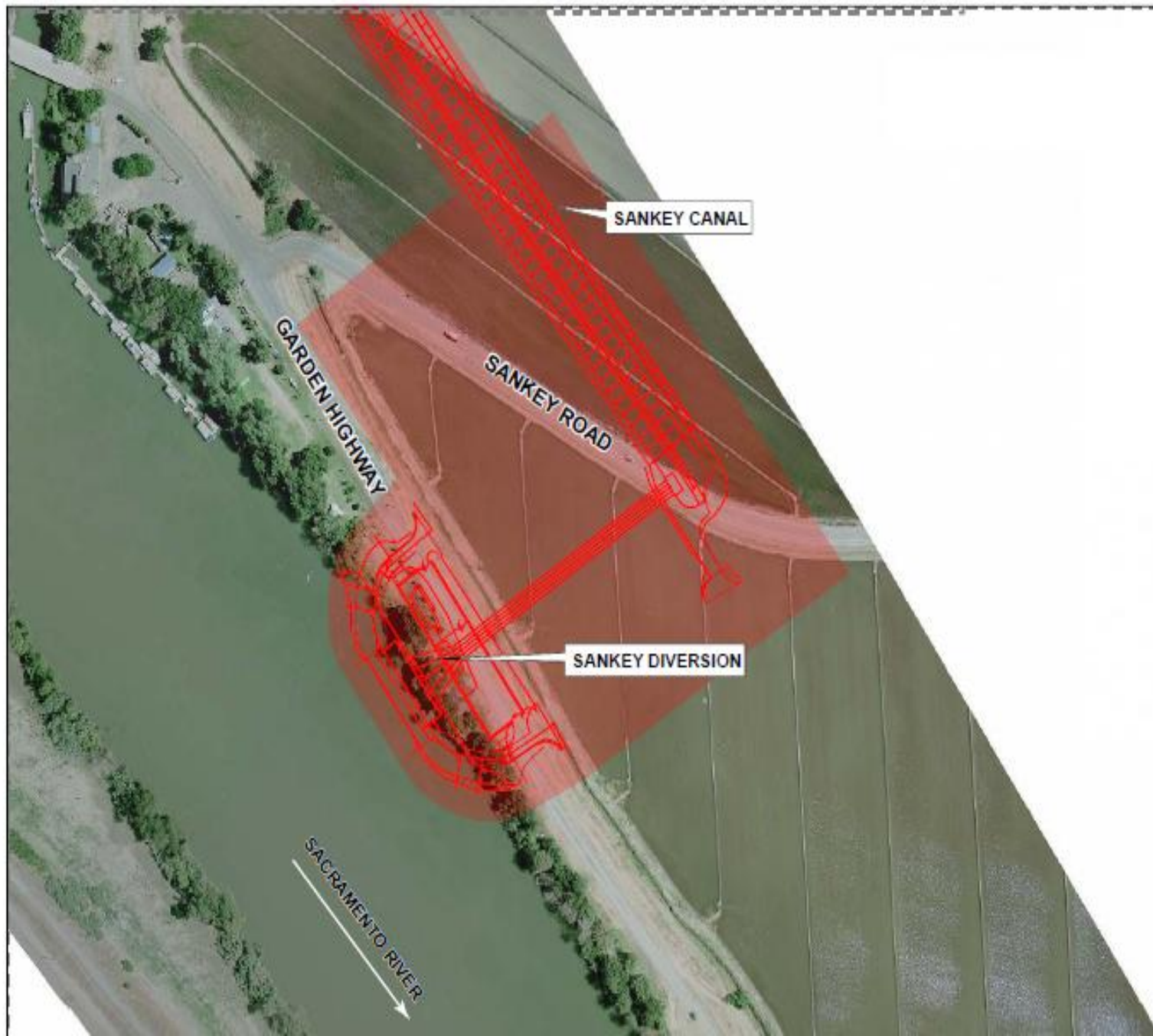
Lake California

Anadromous Fish Screen Program Accomplishments FY 2010



- Initiated construction of the Natomas Mutual Phase I (American Basin) Fish Screen Project (Sankey Diversion) consisting of a 389 cfs screened diversion on the Sacramento River that replaces two existing diversions on the Natomas Cross Canal.





SANKEY CANAL

GARDEN HIGHWAY

SANKEY ROAD

SANKEY DIVERSION

SACRAMENTO RIVER

Recent Construction Activities

Cofferdam Construction & Fish Rescue

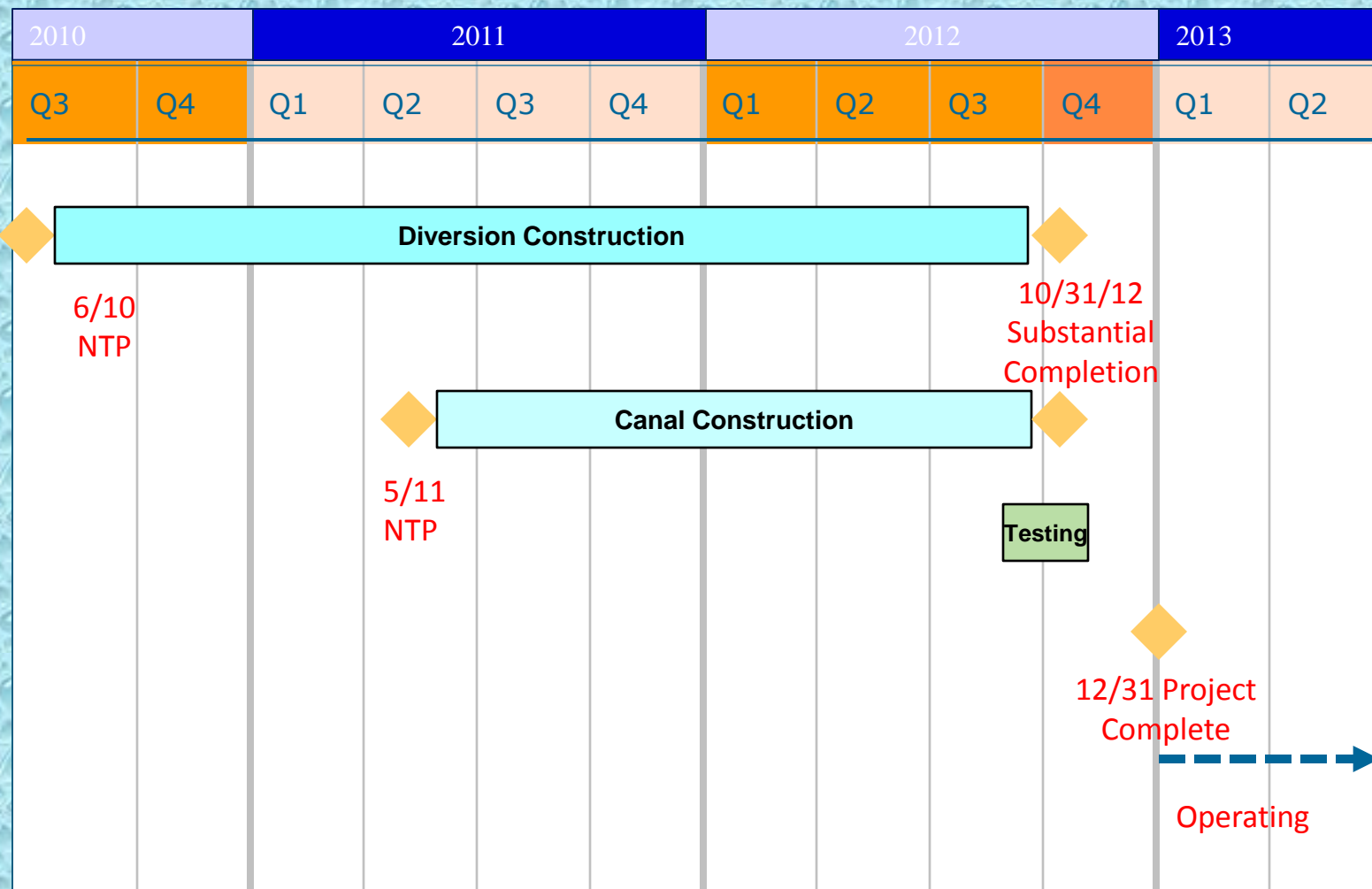


Recent Construction Activities

H Piles & Discharge Structure



Natomas Mutual Basin Fish Screen Project Schedule



Anadromous Fish Screen Program Accomplishments FY 2010 (Cont.)



- Initiated construction of the Patterson ID Fish Screen consisting of a 195 cfs screened diversion on the San Joaquin River. Completion is anticipated in 2011.

Patterson Fish Screen Construction



Patterson Fish Screen



DRAWINGS FOR THE CONSTRUCTION OF THE
Patterson Irrigation District | Fish Screen Intake Project

PREPARED FOR
Patterson Irrigation District



DECEMBER 2009 BID SET

 **MWH**
BUILDING A BETTER WORLD

Anadromous Fish Screen Program Accomplishments FY 2010



- Continued to support design, environmental compliance, and permitting activities for RD 2035 (400 cfs) and Yuba City (74 cfs) fish screen projects.
 - RD 2035 is at 30 % design
 - Yuba City will initiate construction in 2011 with completion expected in 2012.

Anadromous Fish Screen Program Accomplishments FY 2010



- Initiated a two year (2010-2011) hydraulics and fish behavior study at UC Davis. The purpose of the study is to:
 - Identify the critical factors resulting in fish losses at water diversions.
 - Identify potential lower cost options for minimizing fish losses at smaller diversions.



AFSP 2011 Project Funding

■ Natomas Mutual Phase I	\$1.5 M
■ RD 2035	\$1.1 M



A photograph of a large group of salmon swimming in clear, blue water. The fish are silvery with dark backs and are moving in a coordinated pattern, likely during a migration. The water is bright blue with some white foam or bubbles visible.

QUESTIONS?

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